

**PATENT APPLICATION
DOCKET #1285-0124US**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

KAILING JAMES SU et al.

Serial No.: Unassigned

Filed: August 21, 2003

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Group Art Unit: Unassigned

Examiner: Unassigned

For: MULTI-TIME SCALE ADAPTIVE INTERNET PROTOCOL ROUTING SYSTEM AND
METHOD

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Sir:

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Pursuant to 37 CFR §1.56 and in accordance with 37 CFR §§1.97-1.99, information relating to the above-identified application is hereby disclosed. Copies of each of the references listed on the attached Form PTO/SB/08 (A or B or both) are enclosed herewith, subject to the Notice of Waiver issued by the USPTO on July 11, 2003. Certain of the references may contain markings, underlinings or other notations. These markings are not intended and should not be construed as

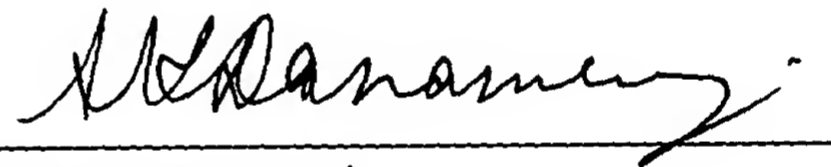
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drawing the Examiner's attention either to selected parts or away from other parts of the references, but such markings were either present on the copies of the references obtained by applicant, or were made thereon during the study of the references by applicant and/or its attorneys.

The submission of any document herewith is not considered as an admission that such document constitutes prior art against the claims of the present application. No rights are waived hereby to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

Respectfully submitted,

Date: August 21, 2003



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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Completion if Known	
		Application Number	
		Filing Date	August 21, 2003
		First Named Inventor	Kailing James Su et al.
		Art Unit	
		Examiner Name	
Sheet 1		of 4	Attorney Docket Number 1285-0124US

OTHER PRIOR ART–NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		D. MORATO, J. ARACI, L.A. DIEZ, M. IZAL and E. MAGANA, "On Linear Prediction of Internet Traffic for Packet and Burst Switching Networks", Computer proceedings, Tenth International Conference on Communications and Networks, pp. 138-143, 2001.	
		J. YANG and M. DEVETSIKIOTIS, "On-Line Estimation, Network Design and Performance Analysis with Effective Bandwidths", In Proceedings of the International Teletraffic Congress, ITC-17, Salvador de Bahia, September 24-28, 2001, Brazil.	
		W. SHEN, "On-Line Measurement of Effective Bandwidth and a Hierarchical Self-Sizing Framework", Masters Thesis, Department of Systems and Computer Engineering, Carleton University, Ottawa, Ontario, Canada, April 15, 2002.	
		W. SHEN and M. DEVETSIKIOTIS, "On-line Estimation of Effective Bandwidth for Long Range Dependent Traffic", submitted to the Second IFIP-TC Networking Conference, Newtorking 2002, May 19-24, 2002, Pisa, Italy.	
		S.A.M. OSTRING and SIRISENA, "The Influence of Long Range Dependence on Traffic Prediction", ICC IEEE International Conference on Communications and Networks, 2001, pp. 1000-1005.	
		S. FLOYD and V. JACOBSON, "Random Early Detection Gateways for Congestion Avoidance", IEEE/ACM Trans. Net. vol. 1, no. 4, Aug. 1993, pp. 397-413.	
		S. ROONEY, J.E. VAN DER MERWE, S.A. CROSBY and I.M. LESLIE, "The Tempest: a Framework for Safe, Resource Assured, Programmable Networks", IEEE Communications Magazine, Oct. 1998, pp. 42-53.	
		H. SAITO and K. SHIOMOTO, "Dynamic Call Admission Control in ATM Networks", JSAC, Vol. 9, Sept. 1991, pp. 982-989.	
		S. TARTARELLI, M. FALKNER, M. DEVETSIKIOTIS, I. LAMBADARIS and S. GIORDANO, "Empirical Effective Bandwidth", In Proceedings of IEEE Globecom 2000, December 2000, San Francisco, pp. 672-678.	
		R. GUERIN, H. AHMADI and M. NAGHSHINEH, "Equivalent Capacity and Its Application to Bandwidth Allocation in High-Speed Networks", IEEE Journal on Selected Areas in Communications, 9(7), Sept 1991, pp. 968-981.	

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		M. GROSSGLAUSER and D.N.C. TSE, "A framework for robust measurement-based admission control", IEEE/ACM Transactions on networking, Volume: 7, Issue: 3, June 1999, pp. 293-309.	
		S. SHENKER, "Fundamental Design Issues for the Future Internet", IEEE JSAC, Vol. 13 (7), September 1981, pp. 1176-1188.	
		Q. HAO and M. DEVETSIKIOTIS, "Self-sizing and Optimization of High-Speed Multiservice Networks", In Proceedings of IEEE Globecom 2000, December 2000, San Francisco, pp. 1818-1823.	
		S. ATHURALIYA, S.H. LOW, V.H. LI and Q. YIN, "REM: Active Queue Management", In IEEE Network, May/June 2001, pp. 48-53.	
		M. MONTGOMERY and G. DE VECIANA, "On the Relevance of Time Scales in Performance Oriented Traffic Characterizations", In Proc. of IEEE INFOCOM '96, April 1996, pp. 513-520.	
		S.A.M. OSTRING, H.R. SIRISENA and I. HUDSON, "Rate control of elastic connections competing with long range dependent network traffic", IEEE Transactions on Communications, Volume 49, issue: 6, June 2001, pp. 1092-1101.	
		R. CACERE et al., "Measurement and Analysis of IP Network Usage and Behavior", IEEE Communication Magazine, May 2000, pp. 144-151.	
		A MOHAMMED, E. JONES, H. OGIER, M.A. VOUK and Z. DWEKAT, "DiffServ Experiments: Analysis of the premium Service over the Alcatel-NCSU Internet2 Testbed", In Proc. of ECUMN '02, Colmar, France, April 2002, PP. 124-130.	
		C.V. HOLLOT, V. MISRA, D. TOWSLEY and W.B. GONG, "On Designing Improved Controllers for AQM Routers Supporting TCP Flows", Proc. IEEE INFOCOM, Apr. 2001, pp. 1726-1734.	
		L. BRESLAU, S. JAMIN and S. SHENKER, "Comments on the Performance of Measurement-based Admission control Algorithms", In Proc. IEEE INFOCOM, 2000, pp. 1233-1242.	

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		J.D. WETHERAL, J.V. GUTTAG and D.L. TENNENHOUSE, "ANTS: A Toolkit for Building and Dynamically Deploying Network Protocols", IEEE OPENARCH '98, San Francisco, CA, April 1999, pp. 117-129.	
		J. YAN, "Adaptive Configuration of Elastic High-Speed Multiclass Networks", In IEEE Communications Magazine, May 1998, pp. 116-120.	
		S. KI, S. PARK and D. ARIFLER, "SMAQ: A Measurement-Based Tool for Traffic modeling and Queuing Analysis Part 2: Network Applications", IEEE Communications Magazine, August 1998, pp. 66-70.	
		P. WANG, Y. YEMINI, D. FLORISSI and J. ZINKY, "A Distributed Resource Controller for QoS Applications", NOMS 2000-IEEE/IFIP Network Operations and Management Symposium, Honolulu, Hawaii, April 2000, pp. 143-156.	
		M. CHRISTIANSEN, K. JEFFAY, D. OTT and F.D. SMITH, "Tuning RED for Web Traffic", In Proc. IEEE/ACM Transactions on Networking, Vol. 9, No. 3, June 2001, pp. 249-264.	
		A. TERZIS, L. WANG, J. OGAWA and L. ZHANG, "A Two-tier Resource Management Model for the Internet", In Proc. of Global Internet: Application and Technology, Global Telecommunications Conference - Globecom '99, Dec. 1999, pp. 1779-1791.	
		IEEE P1520/TS/IP-001, "Proposed IEEE Standard for Application Programming Interfaces for Networks", http://www.ieee-pin.org , pp. 1-10.	
		Y. YEMINI and S. DE SILVA, "Towards Programmable Networks", IFIP/IEEE Intl. Workshop on Distributed Systems: Operations and Management, L'Aquila, Italy, April 15, 1996, pp. 1-11.	
		A. ODLYZKO, "Internet Pricing and History of Communications", Computer Networks, Vol. 36, No. 5-6, Revised version February 8, 2001, pp. 1-40.	
		E. KOHLER, R. MORRIS, B. CHEN, J. JANNOTTI and M.F. KAASHOEK, "The Click modular router", 17th ACM Symposium on Operating Systems Principles, Dec. 1999, Kiawah Island, SC, pp. 1-34.	

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		S. KALYANAASUNDARAM, E.K.P. CHONG and N.B. SHROFF, "Optimal Resource Allocation in Multiclass Networks with User-Specified Utility Functions", In Proceedings of the International Teletraffic Congress, ITC-17, Salvador de Bahia, December 2001, Brazil, pp. 613-630.	
		G. KESIDIS, "Bandwidth Adjustments Using On-line Packet-level Measurements", In Proc. SPIE Conference on Performance and Control of Network Systems, Boston, Sept. 19-22, 1999.	
		R. KELLER, S. CHOI, M. DASEN, D. DECASPER, G. FANKHAUSER and B. PLATTNER, "An active router architecture for multicast video distribution", http://www.arl.wustl.edu/arl .	
		S. HANDELMAN, S. STIBLER and N. BROWNLEE, "RTFM: New Attributes for Traffic Flow Measurement", Network Working Group, RFC 2724, Oct. 1999, pp. 1-16.	
		A.T. CAMPBELL, I. KATZELA, K. MIKI and J. VICENTE, "Open Signaling for ATM, Internet and Mobile Networks", OPENSIG '98, Oct. 5-6, 1998: http://comet.columbia.edu/opensig/activiites , pp. 1-17.	
		S. CHOI, D. DESCASPER, J. DEHART, R. KELLER, J. LOCKWOOD, J. TURNER and T. WOLF, "Design of a flexible open platform for high performance active networks", Proceedings of the Allerton Conferenct October 1999, http://www.arl.wustl.edu/arl .	
		A.T. CAMPBELL, A. ELEFThERIADIS and C. AURRECOECHEA, "End-to-end QoS management of Adaptive Flows", In IEEE Symposium of Multimedia Communications and Video Coding, New York, October 1995.	
		"Forwarding and Control Element Separation (forces)", ForCES working group: http://www.ietf.org , pp. 1-3.	

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